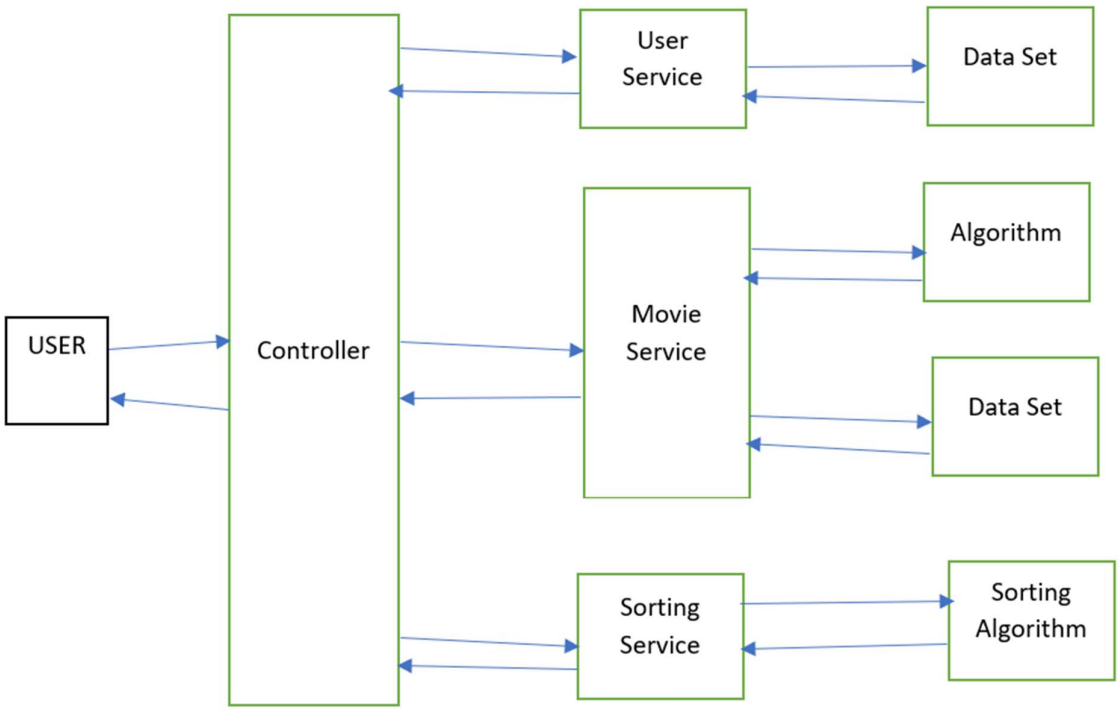
Recommendation App Architecture:



#For Algorithm Design see next page

Algorithm:

- Algorithm works on the basis of watchlist.
- This algorithm finds out which movie user has watched and collect the feature of movies like comedy, sci-fi, etc.
- After collecting features of movies watched by user, algorithm search entire movie dataset and match the features of movie watched with the feature of movie in dataset ignoring watched one, then algorithm collects the name of movies and store it in collection like ArrayList.
- **Pseudo Code:**

```
for(String feature : featuresLiked)
{
    for(Movie movie :  movieList)
    {
        /*
        Core Of Algorithm:
        Matching movie's feature with user watchlist feature to recommend
        Only adding movie which is not in watchlist and recommendation list
        */
        if(movie.getProperties().contains(feature)
                && !moviesWatched.contains(movie.getName())
                && !recommendedMovies.contains(movie.getName()))
        {
            recommendedMovies.add(movie.getName());
        }
    }
}
```

- After storing it in collection (ArrayList), sorting algorithm is called and movies get sorted on the basis of name.
- And then the list of recommend movies is sent to calling method or API.

Running Code Screenshot

User 01 watched Iron Man as per data set:

```
{
  "userId":  "01",
  "name": "Ritesh",
  "watchlist" :
  [
    {
      "id": "02",
      "name": "iron man",
      "properties":
      [
        "action", "sci-fi"
      ]
    }
  ]
},
```

Recommended Movie by my Algorithm are

- Ant Man, Avenger, Captain America, etc (see below screenshot)